

Waiting for MPEG-4. (Coming Soon!)

By Howard Greenfield

ESTRAGON:
Inspiring prospects.
(He turns to
Vladimir.)
Let's go.

VLADIMIR:
We can't.

ESTRAGON:
Why not?

VLADIMIR:
We're waiting for
Godot.

--from
"Waiting for Godot",
Samuel Beckett

When it comes to standards, someone usually wisecracks that a camel is a horse designed by committee. But in the complex world of digital media with its diverse file formats, compression schemes, platform compliance, and interactivity requirements, there is a great pining for clarity and industry momentum that will finally allow content for business, entertainment, and the home to be easily created, shared, and distributed. So, are we making progress, or are we still waiting for MPEG-4?

Though it might seem that most self-determined creative and high-tech types in Broadcast, IT, and media arts would be anti-standards—against operational rules imposed by global committees--most would agree that the spectacular commercial potential of interactive media content that can be easily created and delivered, outweighs the bureaucratic drawbacks.

Many companies have tried to deliver the building blocks for seamless production workflow, but instead of consensus, we've seen rich, but disparate tools that do not plug-and-play well across party lines (e.g. SMIL, QuickTime, Flash, etc.). Many video content management solutions have created niche, or proprietary solutions, and some have gone the way of the dinosaur after the dot-bomb meteor hit. In a time of moderate innovation and weak economics, it's hard to deny that independent standards enable great strides through mass adoption and protection of investment.

Produce Content Once,

What's attractive about MPEG-4 is that it solves many problems. In addition to providing a single form of compression useable by all players, there is the ability to add graphics, text, animation and digital rights management in an object-based setting. A scene description language, conditional behaviors that can be assigned to objects, and a focus on de-coder rendering of objects, deliver very high quality output. I spoke with Rob Koenen, President of the MPEG-4 Industry Forum, who characterized the near-term practical benefits: "interoperable streaming means you have an effective way of dealing with the three different streaming formats [from Microsoft, RealNetworks, Apple Computer], benefiting both users and providers. So, instead of a political choice, or costly investment in all three formats, you can use the one international standard and have done with it." Other bene-



The beauty of platform independent content creation. In theory, the developer can develop content once and deliver to broadcast, cable, HDTV, DVD, Internet, mobile device, and PC alike.

fits Rob points out are the ease of migrating content across hardware platforms—for instance, back and forth between PC and mobile devices. Regarding DVD business benefits: “Finally, you have one standard that can solve decoding, interaction, even on-line integration—a very interesting value proposition. What’s more, delivery of video-on-demand is helped through support of lower bit-rates (lower than MPEG-2) and built-in interfaces to digital rights management.”

Industry forces are behind an integrated solution. RealNetworks announced RealPlayer MPEG-4 support late last year. The ISMA (Internet Streaming Media Alliance) consortium for streaming media standards (AOL Time Warner, Cisco, IBM, Phillips, Sony, Sun, Thomson and others) released a specification for MPEG-4 on the Internet. MovieLink, which will control the vast catalog of movies for an MGM, Sony, WB, Vivendi Universal, and Paramount joint venture, announced non-exclusive use of MPEG-4 for their new video-on-demand distribution service.

All levels of the industry stand to gain in different ways from these advances. eClipsNow! is a small, pioneering Silicon Valley streaming media company that must produce and deliver video in many formats --tape, broadcast, streaming, CD-ROM, DVD, and upcoming wireless applications--to a wide range of clients. CEO Peter Van Beckum welcomes the integration as “a catalyst for getting digital video to the consumer” bypassing the barriers--the inconsistency and fragmentation--of RealPlayer, MediaPlayer, and QuickTime. He believes “it will help, and also be a real breakthrough to have access to source code and integration with Linux servers and Java applications.”

Another sign of the times is MPEG-4 technology provider Envivio’s announcement May 22 of a \$14M second funding round from Bertelsmann, France Telecom, Intel Capital and others. The Envivio Solution includes various components to create, encode, protect and distribute MPEG-4 content. Julien Signès, President and CTO of Envivio said “companies can now encode their content once, stream from one server and know that...all PC and TV users...will get the same quality presentation”. Intel’s Tom Gibbs remarked that their investment in this technology “strengthens Intel’s plan to help the industry build the next generation of personalized and protected media services using our PC, server and handheld device architectures.”

So, are all these advances on the near horizon, or are we seeing a mirage, just waiting for Godot? Two things are keeping us waiting. First is the plodding marketplace: an unavoidable adoption cycle is underway as confusion yields to consensus and standard technical and business processes. The second obstruction is the money factor: the threat of potentially prohibitive licensing costs. Soon after RealNetworks announced support from MPEG-4, MPEG-LA announced a chart of MPEG-4 Visual fees associated with the use of encoders, decoders, and streams utilizing the patented technologies that comprise the standard (there are 18 patent holders represented by MPEG-LA). Noteworthy among these fees is the two cents per hour that would be charged for all streaming. Commenting after this subsequent announcement, RealNetworks’s CEO Rob Glaser suggested this could undermine MPEG-4 “putting the technology on a path to become irrelevant to the industry”. ISMA has communicated similar concerns, and it is a topic on everyone’s mind when it comes to MPEG-4’s viability.



A Virgin Records MPEG-4 music video demonstrates how the end-user interacts with the screen to control object-based animation, video, music and time-based synchronization.

Again, Rob Koenen says “the situation has to be resolved soon, and we need to move forward.” Retaining a clear vision of a single, simple licensing process, he believes pricing will need to be fair and reasonable to survive, let alone for cross-industry advantage and pay-off: “Patent holders can’t ask any royalty rate they want because it will have to compete with alternative technologies and proprietary standards in all of these markets. They will know they have the right business model when people start signing up for licenses. I think this will be achieved by large and small companies that come together with MPEG-LA to determine some realistic pricing benchmarks”.

The road to widespread revenue-generating multimedia content deployment is long, and it has been a laborious evolution for standards like MPEG-4 to focus and take root. So, is this final decision on licensing fees the dramatic apex of the process when all obstacles are resolved? Probably not. Adoption by vendors, service providers and customer applications will follow. It’s more likely we’ll see incremental increases in awareness, broader adoption, and eventual pervasiveness. A standard won’t solve all the problems, but it will provide a much needed functional integrity to the many incongruous tools, formats, and processes in the video and multimedia space. We’ll then start seeing a steady increase in the quality of the technology, content, and revenues. And we’ll stop waiting for Godot.

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About the Writer



Howard Greenfield is a freelance writer who has held leadership roles in Fortune 1000 and some of Silicon Valley's top companies including Sun Microsystems, Informix Software, University of California, Apple Computer, Kraft and was VP, Product Marketing at Obvious Technology and Softface. He is principal of Go Associates, a leading consultancy that develops and implements high-tech product marketing and business development strategies. Howard also currently serves on the board of BlueVoice, a non-profit marine life preservation organization.